



CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

February 9, 2000

H.R. 21 **Homeowners' Insurance Availability Act of 1999**

*As ordered reported by the House Committee on Banking and Financial Services
on November 10, 1999*

SUMMARY

The purpose of H.R. 21 is to increase the availability and affordability of homeowners' insurance for natural disasters by creating a federal disaster reinsurance program. Reinsurance is insurance for insurers; it allows insurers to transfer risk to other entities. H.R. 21 would require the Secretary of the Treasury to offer reinsurance to eligible state-sponsored insurance organizations and private parties (such as insurance companies). The reinsurance program would expire in 10 years unless the Secretary determined that continuation of the program was necessary, in which case the Secretary could extend the program for five additional years.

While the budgetary impact of this 10- to 15-year legislation is uncertain, CBO estimates that enacting the bill would probably increase direct spending over the 2000-2010 period on an expected value basis. Over the 10- to 15-year life of this program, we expect that federal payments for disaster insurance claims would exceed the premiums collected from state programs and private insurance companies for providing disaster reinsurance. Because the bill would affect direct spending, pay-as-you-go procedures would apply.

Two factors make the budgetary impact of H.R. 21 highly uncertain. First, under this bill the Secretary of the Treasury would have considerable discretion to implement the program. Because of that discretion, it is not possible to determine the total amount of reinsurance coverage that might be sold, and thus the potential liability for disaster coverage that the Treasury might face. Although the bill would direct the Secretary to attempt to limit the government's total liability to \$25 billion annually, there would be no enforcement of this limitation. Second, because the frequency and severity of future catastrophic events are exceedingly difficult to estimate, it is unlikely that the federal government would be able to establish prices for disaster reinsurance that would fully cover the potential future costs of these financial obligations.

H.R. 21 also would affect discretionary spending. The reinsurance program might reduce discretionary spending by eliminating the need for some potential future federal payments to homeowners for disaster assistance, but probably not by enough to offset the large payments for which the federal government could be liable. H.R. 21 would authorize the appropriation of \$2 million in fiscal year 2000 and additional sums necessary to cover the costs of establishing and operating an advisory commission and the Secretary's initial administrative expenses. Assuming the appropriation of the necessary amounts, CBO estimates that implementing these and other provisions of the bill would increase discretionary spending by \$1 million in each of fiscal years 2000 and 2001 and by less than \$500,000 annually in the remaining years of the program.

H.R. 21 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA). Any costs incurred by state governments would result from the voluntary purchase of the federal disaster reinsurance that would be established by this bill.

DESCRIPTION OF THE BILL'S MAJOR PROVISIONS

Under H.R. 21, the Secretary of the Treasury would offer to sell reinsurance both to eligible state insurance organizations and private parties (such as insurance companies). Private parties could bid for reinsurance through annual auctions conducted in at least six regions of the country to be defined by the Secretary. Reinsurance would cover damage to residential property from earthquakes, fire, tsunami, cyclones (including hurricanes and typhoons), tornadoes, and volcanic eruptions, but only if the total damage within the state or region exceeds certain thresholds. In general, the reinsurance would cover relatively rare and very damaging natural catastrophes.

The reinsurance would cover only a single peril and last for a term determined by the Secretary. All payments would be made from the reinsurance trust fund established under the bill. If accumulated sales receipts and investment income are insufficient to pay claims and expenses, H.R. 21 would authorize the Secretary to borrow such sums as would be necessary to cover any shortfall. The bill would require the Secretary to repay any borrowing with receipts from future sales of reinsurance contracts.

H.R. 21 contains several provisions intended to control federal spending under the reinsurance program. These provisions would:

- Establish a goal of limiting the federal government's maximum liability to pay reinsurance claims;

- Define thresholds for minimum insured losses that must be sustained in each state or region before contract holders could receive payments; and
- Require prices for reinsurance to include risk loads.

Maximum Federal Liability to Pay Reinsurance Claims

Two provisions in the bill attempt to limit the government's liability to pay reinsurance claims. First, section 9 would set a goal of limiting the aggregate liability under all reinsurance sold in any single year to \$25 billion. The bill would not, however, provide a means to enforce that goal. Second, section 9 would establish an upper limit on the amount of reinsurance that could be sold, and therefore, would limit potential payments. For each state or region, the amount of eligible losses that could be reinsured would be limited to half of the difference between the Secretary's estimates of losses projected from a one-in-500-year event and those projected from a one-in-100-year event. Regardless of the uncertainty the Secretary would face in making these estimates, whatever levels he or she sets under this provision would define an upper limit on reinsurance payments in each state or region.

Minimum Insured Loss Thresholds

Under H.R. 21, payments for reinsurance coverage would begin once certain thresholds of insured losses, determined by the Secretary of the Treasury, have been reached. In the case of reinsurance sold directly to eligible state-sponsored disaster insurance organizations, the threshold would equal the greatest of (1) an amount between \$2 billion and \$5 billion (as specified by the Secretary), (2) the claims-paying capacity of the organization, or (3) an amount within the range defined by the Secretary's estimates of insured losses from a one-in-100-year event and a one-in-250-year event. The Secretary would specify one of these thresholds in each state or region where reinsurance is sold. In general, the highest of these three thresholds would apply, but the Secretary could set a lower threshold under certain circumstances.

For contracts sold at regional auctions, federal payments on reinsurance contracts would begin once aggregate losses to the insurance industry in the region where the auction took place exceed the greater of an amount between \$2 billion and \$5 billion (as specified by the Secretary) or an amount between the Secretary's estimates of losses projected from a one-in-100-year event and a one-in-250-year event. Under certain conditions, the Secretary could adjust the damage threshold established for each region.

Adding Risk Loads to the Price of Reinsurance

H.R. 21 would establish the National Commission on Catastrophe Risks and Insurance Losses to perform actuarial analyses and recommend prices for reinsurance to the Secretary. Prices would include a risk-based price, a risk load at least equal to the risk-based price, and an amount to cover administrative costs. The risk-based price would reflect the estimate of the average annual payout of the reinsurance contract, taking into account the estimated probabilities of catastrophic events of the relevant sizes. In private disaster reinsurance markets, a risk load is an amount added to the risk-based price to compensate the reinsurer for the variability of payments in any given year around the long-run average, and for the uncertainty surrounding available estimates of the average annual payout itself. H.R. 21 would require a minimum risk load for each contract of at least 100 percent of its risk-based price.

COST TO THE FEDERAL GOVERNMENT

CBO estimates that enacting H.R. 21 probably would increase direct spending over the 10- to 15-year life of the program. We cannot quantify the amount nor the timing of this expected additional spending.

Assuming appropriation of the necessary amounts, implementing the bill would increase discretionary spending by \$1 million in each of fiscal years 2000 and 2001 and by less than \$500,000 annually over the remaining years of the program. Other discretionary federal payments for disaster assistance might be reduced somewhat as a result of enacting H.R. 21, but probably not by enough to offset the large payments for which the federal government could be liable.

Direct Spending (Including Offsetting Receipts)

Over the life of the program, CBO estimates that enacting the bill would likely result in a net increase in direct spending. Because of the lack of historical data on which to base actuarial estimates of losses from catastrophic events and the potential for political and consumer pressures to keep reinsurance coverage affordable, CBO expects that reinsurance probably would be priced too low. CBO also expects that authorizing the Secretary to require lower loss thresholds in the first several years of the program and conducting the program on a regional basis would increase the probability that the contracts would yield one or more payments during the program's lifetime.

Likelihood That Reinsurance Would Be Priced Too Low. If the Secretary had all relevant information needed to price reinsurance to break even, the expected cost of the program would be zero, or it would generate net receipts, even though the actual cost could be higher or lower depending on the random occurrence of covered events. The actuarial estimates of catastrophe risk that would be used under the bill as the basis for setting minimum prices, however, do not provide sufficient information to accurately price contracts.

Actuarial estimates of catastrophic risk are backward-looking, based on available historical data. Because catastrophic events are infrequent, historical data used by models that estimate losses from these events, are very limited. Thus, CBO has little confidence in the accuracy of actuarial estimates of catastrophe losses that would be used to set prices for reinsurance.

Private reinsurers respond to the uncertainty surrounding actuarial estimates of losses by including substantial “risk loads” in their prices, in part to account for the likelihood that available historical data do not fully capture current catastrophe risks. Risk loads observed in private transactions for disaster reinsurance against infrequent events, similar to those that would be covered under H.R. 21, are typically four to six times but sometimes exceed 10 times actuarially expected losses. Although beliefs about the inaccuracy of actuarial estimates are not the only factors driving such high risk loads, evidence suggests that the additional compensation that private reinsurers require for taking on catastrophic risk is much larger than the 100-percent risk load required as a minimum in the bill.

Moreover, consumer and political pressures probably would create a strong incentive to keep reinsurance prices low to address the perceived price and availability problems in the market for homeowners’ insurance. Similarly, although bidding could drive the prices of contracts sold at auctions to their true break-even value even if their minimum prices were set too low, CBO cannot be confident that the contracts would attract sufficient demand to drive up their prices.

Finally, even if the government were just as likely to set some contract prices too high as too low, the implications for the budget would not be symmetric. This is because low contract prices would encourage sales while high contract prices would discourage sales. Because the government would tend to sell more reinsurance at a loss than at a gain, the result would be a net loss.

Likelihood of Reinsurance Payments. Although the Secretary would have the authority to set lower thresholds for minimum insured losses during the first few years of the program, payments under H.R. 21 generally would cover only insured losses that exceed those expected from a one-in-100-year event. It is possible, however, that the claims-paying capacity of state disaster insurance organizations may fall well short of this level. Since the Secretary would be authorized to lower the loss thresholds required for payouts from the

state contracts in the first five to seven years of the program if claims-paying capacities are too low, reinsurance sold to state organizations during that time would be likely to cover events that occur more frequently than once every 100 years.

In addition, the annual probability of a one-in-100-year event may be more than 1 percent, either because the historical data underlying the estimates of the frequency of events are inadequate or because the timing of such events is affected by cyclical factors. Furthermore, by dividing the nation into at least six regions, the bill could increase the probability that the federal government would make reinsurance payments. Events with an annual probability of 1 percent or more annual probability would have at least 60 chances to occur over the life of the program—one per year in each of the six or more regions created. For these reasons, CBO believes that there is a significant probability of one or more payments during the program's lifetime.

Spending Subject to Appropriation

The bill would authorize additional discretionary spending in 2000 and 2001. The reinsurance program also could lead to a reduction in the demand for some discretionary spending in future years, but CBO cannot estimate the timing or magnitude of any such impact. Any reduction in discretionary spending would depend on future appropriation actions.

Estimated Discretionary Costs. H.R. 21 would authorize the appropriation of \$2 million in 2000 and such sums as may be necessary in later years to establish and operate the federal advisory commission and to cover the Secretary's administrative expenses. Assuming appropriation of the authorized amounts, CBO estimates that these activities would cost \$1 million in each of fiscal years 2000 and 2001, but would not significantly affect federal spending thereafter.

H.R. 21 also would direct the General Accounting Office (GAO) to perform an annual audit of the auctions for disaster reinsurance contracts established under the bill and to prepare a study on the availability and cost of insurance against flooding resulting from hurricanes. Based on information from GAO, CBO estimates that the cost of these activities would be less than \$500,000 in any given year.

Potential Discretionary Savings. Implementing the reinsurance program established under the bill could reduce the need for future appropriations to the Federal Emergency Management Agency (FEMA) to provide disaster relief to homeowners for two reasons. First, the program would help private insurers manage more catastrophe risk at less cost. If insurers translate this lower risk into either lower premiums or more generous policies for

homeowners, the amount of private disaster coverage could expand and fewer homeowners may need assistance from FEMA in the event of a catastrophe. CBO cannot estimate the likelihood or magnitude of any such savings because we cannot predict the extent that homeowners coverage might expand or how any such expansion might reduce spending by FEMA.

Second, H.R. 21 would increase funding for programs to mitigate natural disasters in the communities where reinsurance is sold. This emphasis on mitigation might reduce homeowners' need for disaster assistance in the future, but CBO cannot estimate the timing or size of any such savings. Though recent studies have provided evidence that certain mitigation efforts can be effective, the magnitude of any such savings to the federal government remains speculative.

The homeowners' disaster reinsurance program established under H.R. 21 would not affect federal spending for other disaster assistance programs, such as catastrophic crop insurance, the Emergency Conservation Program, the Small Business Administration's disaster loan program, and FEMA's public assistance program to replace and repair damages to bridges, roads, and other infrastructure. These programs benefit individuals or organizations that would not be affected by the homeowner reinsurance offered under H.R. 21.

PAY-AS-YOU-GO CONSIDERATIONS

The Balanced Budget and Emergency Deficit Control Act specifies pay-as-you-go procedures for legislation affecting direct spending or receipts. CBO expects that enacting H.R. 21 would increase direct spending, but we cannot estimate the magnitude or timing of such spending.

ESTIMATED IMPACT ON STATE, LOCAL, AND TRIBAL GOVERNMENTS

H.R. 21 contains no intergovernmental mandates as defined in UMRA and would benefit states that choose to participate in the reinsurance program established by this bill. Eligible state-sponsored insurance organizations could purchase federal reinsurance at an established price or at regional auctions. Other state insurance organizations could purchase federal reinsurance only at regional auctions. Purchasing the federal reinsurance would transfer some of the risk associated with large-scale natural disasters to the federal government. Any costs incurred by state governments would result from voluntary participation in this program.

ESTIMATED IMPACT ON THE PRIVATE SECTOR

This bill would impose no new private-sector mandates as defined in UMRA.

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